Math 221 - Quiz #4 Name _____

You must show all relevant work to receive full credit. The point value of each problem is shown in the left hand margin.

(3) 1. Integrate:

$$\int \frac{1}{4x^2 + 4x + 5}\, dx$$

(3) 2. Is the area under the curve $y = \dfrac{1}{x}$ from 1 to ∞ finite or not. Justify your answer.

(2) 3. Find the cartesian coordinates of the point with polar coordinates (-2, $\dfrac{\pi}{2}$).

(2) 4. Write the polar equation $r = \sin\theta$ in cartesian coordinates.